Name _____ Date _____

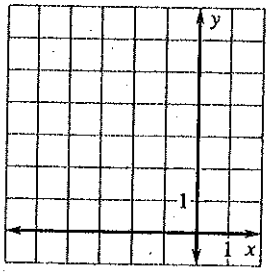
LESSON 6.7

# Practice C

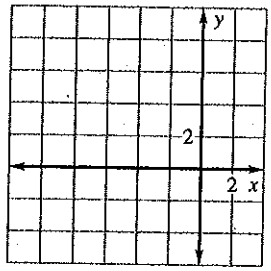
*For use with pages 408–415*

**Draw the dilation of the polygon with the given vertices using the given scale factor *k*.**

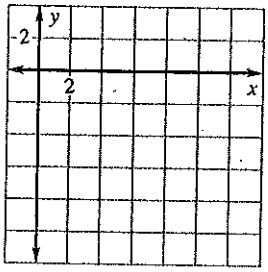
**1.** $A(-3, 6), B(0, 0), C(-6, 0); k = \frac{2}{3}$



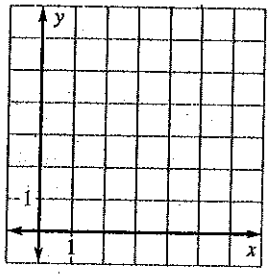

**2.** $A(-2, -2), B(-2, 4), C(0, 2); k = \frac{3}{2}$




**3.** $A(3, 0), B(6, -3), C(3, -6), D(0, -3); k = \frac{5}{3}$

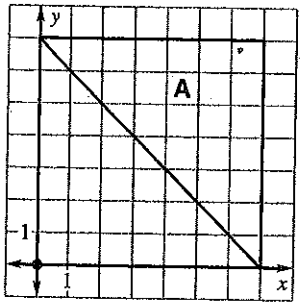


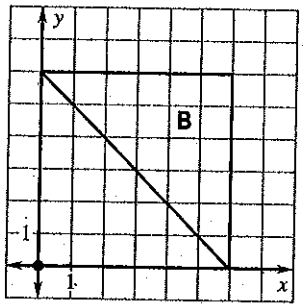

**4.** $A(6, 24), B(24, 30), C(18, 6), D(6, 0); k = \frac{1}{6}$



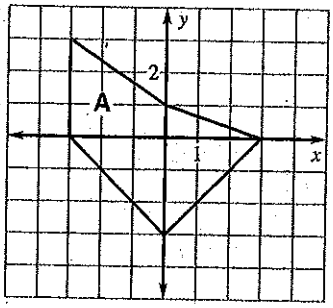

**Determine whether the dilation from Figure A to Figure B is a *reduction* or an *enlargement*. Then find its scale factor.**

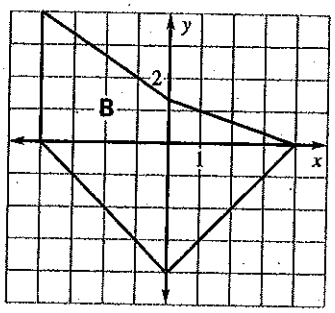
**5.**




**6.**



Name _____ Date _____

LESSON 6.7 **Practice C** *continued*
*For use with pages 408–415*

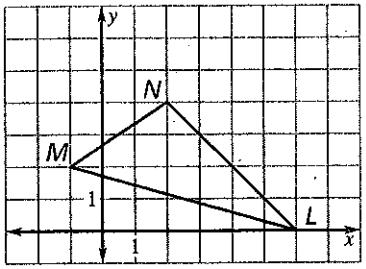
**Use the given point coordinates to determine whether $\triangle DEF$ is a dilation of $\triangle ABC$. If so, state the scale factor of the dilation.**

7. $A(42, 28)$, $B(35, 14)$, $C(14, 21)$; $D(36, 24)$, $E(30, 12)$, $F(12, 16)$

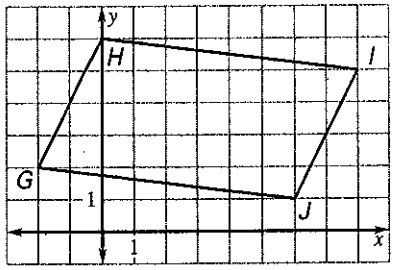
8. $A(-54, 108)$, $B(45, 36)$, $C(-27, -18)$; $D(-72, 144)$, $E(60, 48)$, $F(-96, -24)$

**Use the given scale factor $k$ to find the coordinates of the vertices of the image of the given polygon.**

9. $k = \frac{2}{3}$

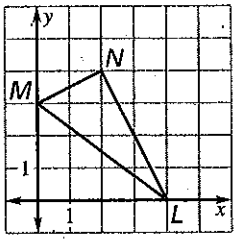



10. $k = \frac{5}{2}$

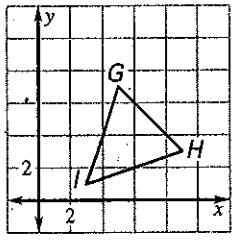



**The polygon shown is the image of a polygon after a dilation using the scale factor $k$. Find the coordinates of the vertices of the original polygon.**

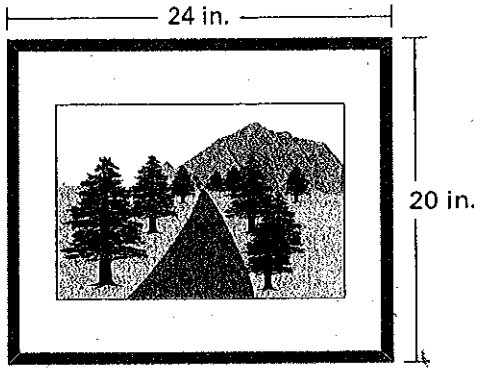
11. $k = \frac{1}{3}$




12. $k = 3$




13. **Picture Frame** You are going to enlarge a 4-inch by 6-inch photograph to the largest size that can be centered within a 20-inch by 24-inch picture frame with a matte border of at least 3 inches on all four sides.


   a. What size do you need to make the enlarged photo?
   b. What scale factor should you use for the enlargement?
   c. How wide should the matte border be on each side?